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10/021,203

10/30/2001

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EXAMINER

BELL, MELTIN

ART UNIT

PAPER NUMBER

2121

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12

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

10/021,203

Applicant(s)

BIGUS ET AL.

Examiner

Meltin Bell

Art Unit

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 03 August 2004.  
2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.  
3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-33,57 and 93 is/are pending in the application.  
4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.  
5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.  
6) ☒ Claim(s) 1-33,57 and 93 is/are rejected.  
7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.  
8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.  
10) ☒ The drawing(s) filed on 30 October 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).  
11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☐ All b) ☐ Some \* c) ☐ None of:  
1. ☐ Certified copies of the priority documents have been received.  
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).  
\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)  
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)  
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date 11-8/9/04.  
4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.  
5) ☐ Notice of Informal Patent Application (PTO-152)  
6) ☐ Other: \_\_\_\_\_.

### **DETAILED ACTION**

This action is responsive to application **10/021,203** filed 10/30/2001 as well as the Specification Changes and Amendment filed 8/3/04. Claims 1-33, 57 and 93 filed by the applicant have been entered and examined. Claims 34-56, 58-92 and 94-104 have been canceled. An action on the merits of claims 1-33, 57 and 93 appears below.

#### ***Claim Rejections - 35 USC § 101***

35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

Claims 18, 33 and 93 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter. The language of the claims (e.g. "intelligent agent", "operational condition") raise a question as to whether the claims are directed merely to an abstract idea that is not tied to a technological art, environment or machine which would result in a practical application producing a concrete, useful, and tangible result to form the basis of statutory subject matter under 35 U.S.C. 101. For example, if claim 18 was amended to recite a computer-implemented method, it will be statutory in most cases since use of technology permits the function of the descriptive material to be realized.

***Claim Rejections - 35 USC § 102***

To expedite a complete examination of the instant application, the claims rejected under 35 U.S.C. 101 (nonstatutory) above are further rejected as set forth below in anticipation of applicant amending these claims to place them within the four statutory categories of invention.

Applicant's arguments have been considered, but are not persuasive. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 1-11, 13-16, 18-24, 26-29, 31 and 32 are rejected under 35 U.S.C. 102(e) as being anticipated by *Bigus et al* U.S. Patent Number 6,192,354 "Apparatus and method for optimizing the performance of computer tasks using multiple intelligent agents having varied degrees of domain knowledge" (February 20, 2001 - Publication Date, March 21, 1997 - Filing Date).

**Regarding claim 1:**

*Bigus et al* teaches,

- (a) first and second product support intelligent agents configured to perform product support operations in connection with a computer-related product (column 2, lines 59-65, "Intelligent agents may... of the client")

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- (b) a first agent platform configured to execute on a customer computer that utilizes the computer-related product (Figs. 5-6; column 8, lines 27-34, "an agent may...an agents' permutations"; column 10, lines 12-35, "Servers 65 of remote...in the alternative")

- (c) a product support program resident on a product support computer used in providing product support for the computer-related product, the product support program including a second agent platform, and the product support program configured to dispatch the first product support intelligent agent to the customer computer for execution by the first agent platform, and to initiate execution of the second product support intelligent agent by the second agent platform (column 10, lines 49-59, "FIG. 7 illustrates an exemplary...of the client")

**Regarding claim 2:**

*Bigus et al* further teaches,

- the first and second product support agents are configured to communicate with one another (Figs. 5-6)

**Regarding claim 3:**

*Bigus et al* further teaches,

- the first product support intelligent agent is configured to execute on either the first or second agent platforms (column 10, lines 17-27, "the agent host...interacts with agent 100")

**Regarding claim 4:**

*Bigus et al* further teaches,

- the customer computer is the computer-related product (column 5, lines 6-14, "Intelligent agents are...another computer process")

**Regarding claim 5:**

*Bigus et al* further teaches,

- the computer-related product comprises at least one of an internal software component, an internal hardware component, an external software component and an external hardware component associated with the customer computer (Fig. 4; column 10, lines 60-65, "One or more...as external databases")

**Regarding claim 6:**

*Bigus et al* further teaches,

- each of the first and second product support intelligent agents is configured to perform product support operation selected from the group consisting of monitoring operational data, collecting operational data, analyzing operational data, identifying an undesirable operational condition in the customer computer, selecting another intelligent agent to remedy the undesirable operational condition, creating another intelligent agent to remedy the undesirable operational condition, performing at least one task to remedy the undesirable operational condition and combinations thereof (column 5, lines 42-53, "agents may have...networks vs. procedural logic), etc.")

**Regarding claim 7:**

*Bigus et al* further teaches,

- the first product support intelligent agent is configured to collect operational data associated with the computer-related product, and wherein the second product support intelligent agent is configured to analyze the operational data collected by the first product support intelligent agent to identify an undesirable operational condition for the computer-related product (column 6, lines 6-13, "domain knowledge for...sales are low")

**Regarding claim 8:**

*Bigus et al* further teaches,

- the product support program is further configured to dispatch a remedy intelligent agent to remedy the undesirable operational condition (column 6, lines 6-13, "domain knowledge for...sales are low")

**Regarding claim 9:**

*Bigus et al* further teaches,

- the product support program is further configured to create the remedy intelligent agent (column 8, lines 27-36, "an agent may...perform its task")

**Regarding claim 10:**

*Bigus et al* further teaches,

- the product support program is further configured to publish the remedy intelligent agent with a distribution control that limits distribution of the remedy intelligent agent (column 11, lines 39-56, "Agent manager 32 provides...functionality of module 34")

**Regarding claim 11:**

*Bigus et al* further teaches,

- the product support program is further configured to select the remedy intelligent from among a plurality of existing remedy agents (Fig. 3; column 8, lines 52-56, "an agent 220 may...perform the task")

**Regarding claim 13:**

*Bigus et al* further teaches,

- the second product support intelligent agent is configured to collect operational data from the customer computer while resident on the product support computer (Fig. 6; column 6, lines 6-13, "domain knowledge for... sales are low")

**Regarding claim 14:**

*Bigus et al* further teaches,

- the customer computer and the product support computer are coupled to one another over the Internet (column 8, lines 66-67, "A representative hardware...the invention is illus-"; column 9, lines 1-13, "trated in FIG. 4, where a ...and public networks (e.g., the Internet)")

**Regarding claim 15:**

*Bigus et al* further teaches,

- a cross-customer knowledge base including operational data associated with a plurality of customers wherein the second product support intelligent agent is configured to analyze the operational data stored in the cross-customer knowledge base to identify an undesirable operational condition in the computer-related product (column 6, lines 6-



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13, "domain knowledge for... sales are low"; column 10, lines 12-22, "Server 65 of remote...and their clients")

**Regarding claim 16:**

*Bigus et al* further teaches,

- the second product support intelligent agent is configured to analyze the operational data using logic selected from the group consisting of neural network logic, fuzzy logic, pattern matching logic, script logic, and combinations thereof (column 7, lines 35-44, "Agents or program...the objective criteria")

**Regarding claim 18:**

*Bigus et al* teaches,

- (a) dispatching a first product support intelligent agent from a product support computer to a customer computer to execute on a first agent platform resident on the customer computer to perform a first product support operation associated with the computer-related product (column 2, lines 59-65, "Intelligent agents may...of the client"; Figs. 5-6; column 10, lines 12-35, "Servers 65 of remote...in the alternative"; column 10, lines 49-59, "FIG. 7 illustrates an exemplary...of the client")

- (b) executing a second product support intelligent agent on a second agent platform resident on the product support computer to perform a second product support operation associated with the computer-related product (column 8, lines 27-34, "an agent may...an agents' permutations")

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**Regarding claim 19:**

*Bigus et al* further teaches,

- the first and second product support agents are configured to communicate with one another when performing the first and second product support operations (Figs. 5-6)

**Regarding claim 20:**

*Bigus et al* further teaches,

- each of the first and second product support operations are selected from the group consisting of monitoring operational data, collecting operational data, analyzing operational data, identifying an undesirable operational condition in the customer computer, selecting another intelligent agent to remedy the undesirable operational condition, creating another intelligent agent to remedy the undesirable operational condition, performing at least one task to remedy the undesirable operational condition, and combinations thereof (column 5, lines 42-53, "agents may have... networks vs. procedural logic), etc.")

**Regarding claim 21:**

*Bigus et al* further teaches,

- the first product support intelligent agent is configured to collect operational data associated with the computer-related product, and wherein the second product support intelligent agent is configured to analyze the operational data collected by the first product support intelligent agent to identify an undesirable operational condition for the computer-related product (column 6, lines 6-13, "domain knowledge for... sales are low")

**Regarding claim 22:**

*Bigus et al* further teaches,

- dispatching a remedy intelligent agent to at least one of the customer computer and the product support computer to remedy the undesirable operational condition (column 6, lines 6-13, "domain knowledge for... sales are low")

**Regarding claim 23:**

*Bigus et al* further teaches,

- creating the remedy intelligent agent (column 8, lines 27-36, "an agent may... perform its task")

**Regarding claim 24:**

*Bigus et al* further teaches,

- publishing the remedy intelligent agent with a distribution control that limits distribution of the remedy intelligent agent (column 11, lines 39-56, "Agent manager 32 provides... functionality of module 34")

**Regarding claim 26:**

*Bigus et al* further teaches,

- the second product support intelligent agent is configured to collect operational data from the customer computer while resident on the product support computer (Fig. 6; column 6, lines 6-13, "domain knowledge for... sales are low")

**Regarding claim 27:**

*Bigus et al* further teaches,

- the customer computer and the product support computer are coupled to one another over the Internet (column 8, lines 66-67, "A representative hardware...the invention is illus-"; column 9, lines 1-13, "trated in FIG. 4, where a ... and public networks (e.g., the Internet)")

**Regarding claim 28:**

*Bigus et al* further teaches,

- the second product support intelligent agent is configured to analyze the operational data stored in the cross-customer knowledge base to identify an undesirable operational condition in the computer-related product (column 6, lines 6-13, "domain knowledge for...sales are low"; column 10, lines 12-22, "Server 65 of remote...and their clients")

**Regarding claim 29:**

*Bigus et al* further teaches,

- the second product support intelligent agent is configured to analyze the operational data using logic selected from the group consisting of neural network logic, fuzzy logic, pattern matching logic, script logic, and combinations thereof (column 7, lines 35-44, "Agents or program...the objective criteria")

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**Regarding claim 31:**

*Bigus et al* teaches,

- (a) first and second product support intelligent agents configured to perform product support operations in connection with a computer-related product (column 2, lines 59-65, "Intelligent agents may... of the client")
- (b) a first agent platform configured to execute on a customer computer that utilizes the computer-related product (Figs. 5-6; column 8, lines 27-34, "an agent may... an agents' permutations"; column 10, lines 12-35, "Servers 65 of remote ... in the alternative")
- (c) a product support program configured to reside on a product support computer used in providing product support for the computer-related product, the product support program including a second agent platform, and the product support program configured to dispatch the first product support intelligent agent to the customer computer for execution by the first agent platform, and to initiate execution of the second product support intelligent agent by the second agent platform (column 10, lines 49-59, "FIG. 7 illustrates an exemplary... of the client")
- (d) at least one computer-readable signal bearing; medium bearing the first and second product support agents, the first agent platform, and the product support program (column 10, lines 38-45, "the various embodiments ... drives, and CD-ROM's")

**Regarding claim 32:**

*Bigus et al* further teaches,

- the signal bearing medium includes at least one of a transmission medium or a recordable medium (column 10, lines 45-46, "and transmission type media such as digital and analog communications links")

***Claim Rejections - 35 USC § 103***

To expedite a complete examination of the instant application, the claims rejected under 35 U.S.C. 101 (nonstatutory) above are further rejected as set forth below in anticipation of applicant amending these claims to place them within the four statutory categories of invention.

Applicant's arguments have been considered, but are not persuasive for claims 12, 17, 25, 30, 33 and 93 and moot in view of claim 57's new grounds of rejection. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the Office presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under

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37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the Office to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

Claims 12 and 25 are rejected under 35 U.S.C. 103(a) as being unpatentable over *Bigus et al* in view of *Kopelman* "Accelerated engineering: the 3 secrets to just-in-time product development (JITPD)" (27-29 Sept. 1994).

**Regarding claim 12:**

*Bigus et al* teaches,

- (a) first and second product support intelligent agents configured to perform product support operations in connection with a computer-related product (column 2, lines 59-65, "Intelligent agents may... of the client")
- (b) a first agent platform configured to execute on a customer computer that utilizes the computer-related product (Figs. 5-6; column 8, lines 27-34, "an agent may... an agents' permutations"; column 10, lines 12-35, "Servers 65 of remote... in the alternative")
- (c) a product support program resident on a product support computer used in providing product support for the computer-related product, the product Support program including a second agent platform, and the product Support program configured to dispatch the first product support intelligent agent to the customer computer for execution by the first. agent platform, and to initiate execution of the

second product support intelligent agent by the second agent platform (column 10, lines 49-59, "FIG. 7 illustrates an exemplary...of the client")

- the first product support intelligent agent is configured to collect operational data associated with the computer-related product, and wherein the second product support intelligent agent is configured to analyze the operational data collected by the first product support intelligent agent to identify an undesirable operational condition for the computer-related product (column 6, lines 6-13, "domain knowledge for... sales are low")
- the product support program is further configured to dispatch a remedy intelligent agent to remedy the undesirable operational condition (column 6, lines 6-13, "domain knowledge for... sales are low")

However, *Bigus et al* doesn't explicitly teach the product support program is configured to dispatch the remedy intelligent agent between product releases of the computer-related product while *Kopelman* teaches,

- the product support program is configured to dispatch the remedy intelligent agent between product releases of the computer-related product (page 365, left column, SECRET #3 section, paragraph 1, sentence 1, "And third, the team...prototypes early on")

Motivation - The portions of the claimed apparatus would have been a highly desirable feature in this art for accelerating engineering development (*Kopelman*, page 362, left column, paragraph 4, "So our companies'... Product Development (QRPD)").

Therefore, it would have been obvious to one of ordinary skill in the art at the time the



invention was made, to modify *Bigus et al* as taught by *Kopelman* for the purpose of accelerating engineering development.

**Regarding claim 25:**

*Bigus et al* teaches,

- (a) dispatching a first product support intelligent agent from a product support computer to a customer computer to execute on a first agent platform resident on the customer computer to perform a first product support operation associated with the computer-related product (column 2, lines 59-65, "Intelligent agents may...of the client"; Figs. 5-6; column 10, lines 12-35, "Servers 65 of remote...in the alternative"; column 10, lines 49-59, "FIG. 7 illustrates an exemplary...of the client")
- (b) executing a second product support intelligent agent on a second agent platform resident on the product support computer to perform a second product support operation associated with the computer-related product (column 8, lines 27-34, "an agent may...an agents' permutations")
- the first product support intelligent agent is configured to collect operational data associated with the computer-related product, and wherein the second product support intelligent agent is configured to analyze the operational data collected by the first product support intelligent agent to identify an undesirable operational condition for the computer-related product (column 6, lines 6-13, "domain knowledge for...sales are low")
- dispatching a remedy intelligent agent to at least one of the customer computer and the product support computer to remedy the undesirable operational condition (column 6, lines 6-13, "domain knowledge for...sales are low")

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However, *Bigus et al* doesn't explicitly teach dispatching the remedy intelligent agent occurs between product releases of the computer-related product while *Kopelman* teaches,

- dispatching the remedy intelligent agent occurs between product releases of the computer-related product (page 365, left column, SECRET #3 section, paragraph 1, sentence 1, "And third, the team...prototypes early on")

Motivation - The portions of the claimed method would have been a highly desirable feature in this art for accelerating engineering development (*Kopelman*, page 362, left column, paragraph 4, "So our companies'... Product Development (QRPD)").

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made, to modify *Bigus et al* as taught by *Kopelman* for the purpose of accelerating engineering development.

Claims 17, 30, 33 and 93 are rejected under 35 U.S.C. 103(a) as being unpatentable over *Bigus et al* in view of *Stidolph* "Evolutionary Design of Complex Software (EDCS) Demonstration Days 1999" (January 2000).

**Regarding claim 17:**

*Bigus et al* teaches,

- (a) first and second product support intelligent agents configured to perform product support operations in connection with a computer-related product (column 2, lines 59-65, "Intelligent agents may...of the client")

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- (b) a first agent platform configured to execute on a customer computer that utilizes the computer-related product (Figs. 5-6; column 8, lines 27-34, "an agent may... an agents' permutations"; column 10, lines 12-35, "Servers 65 of remote... in the alternative")

- (c) a product support program resident on a product support computer used in providing product support for the computer-related product, the product support program including a second agent platform, and the product support program configured to dispatch the first product support intelligent agent to the customer computer for execution by the first. agent platform, and to initiate execution of the second product support intelligent agent by the second agent platform (column 10, lines 49-59, "FIG. 7 illustrates an exemplary... of the client")

- third parties scanning intelligent agents (column 6, lines 14-22, "Domain knowledge may... for the client")

However, *Bigus et al* doesn't explicitly teach the first and second product support intelligent agents are associated with different vendors while *Stidolph* teaches

- the first and second product support intelligent agents are associated with different vendors (page 108, right column, "WebDAV: <http://www.ics.uci.edu/pub/edcs/>" section, "WebDAV is an... of distributed files")

Motivation - The portions of the claimed apparatus would have been a highly desirable feature in this art for evolving cheap software quickly (*Stidolph*, page 95, left column, "The Evolutionary Design of Complex Software (EDCS) Program" section, paragraph 2, "The ultimate vision... meet changing requirements – evolutionary systems"). Therefore,

it would have been obvious to one of ordinary skill in the art at the time the invention was made, to modify *Bigus et al* as taught by *Stidolph* for the purpose of evolving cheap software quickly.

**Regarding claim 30:**

*Bigus et al* teaches,

- (a) dispatching a first product support intelligent agent from a product support computer to a customer computer to execute on a first agent platform resident on the customer computer to perform a first product support operation associated with the computer-related product (column 2, lines 59-65, "Intelligent agents may...of the client"; Figs. 5-6; column 10, lines 12-35, "Servers 65 of remote...in the alternative"; column 10, lines 49-59, "FIG. 7 illustrates an exemplary...of the client")
- (b) executing a second product support intelligent agent on a second agent platform resident on the product support computer to perform a second product support operation associated with the computer-related product (column 8, lines 27-34, "an agent may...an agents' permutations")

However, *Bigus et al* doesn't teach the first and second product support intelligent agents are associated with different vendors while *Stidolph* teaches,

- the first and second product support intelligent agents are associated with different vendors (page 108, right column, "WebDAV: <http://www.ics.uci.edu/pub/edcs/>" section, "WebDAV is an...of distributed files")

Motivation - The portions of the claimed method would have been a highly desirable feature in this art for evolving cheap software quickly (*Stidolph*, page 95, left column,

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"The Evolutionary Design of Complex Software (EDCS) Program" section, paragraph 2, "The ultimate vision...meet changing requirements – evolutionary systems"). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made, to modify *Bigus et al* as taught by *Stidolph* for the purpose of evolving cheap software quickly.

**Regarding claim 33:**

*Bigus et al* teaches,

- (b) identifying an undesirable operational condition associated with the computer-related product from the collected operational data (column 5, lines 42-53, "agents may have...networks vs. procedural logic), etc."; column 6, lines 6-13, "domain knowledge for...sales are low")
- (c) creating a product support intelligent agent configured to remedy the undesirable operational condition (column 6, lines 6-13, "domain knowledge for...sales are low")
- collecting operational data from a customer computer that utilizes the computer-related product during operation of the customer computer (column 8, lines 66-67, "A representative hardware...the invention is illus-"; column 9, lines 1-13, "trated in FIG. 4, where a ...and public networks (e.g., the Internet)"; column 6, lines 6-9, "domain knowledge for...inventory monitoring agent")

However, *Bigus et al* doesn't explicitly teach (a) collecting operational data from a plurality of customer computers that utilize the computer-related product during operation of the plurality of customer computers or (d) distributing the product support intelligent agent to at least first and second customer computers from the plurality of

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customer computers to remedy the undesirable operational condition in the first and second customer computers while *Stidolph* teaches,

- (a) collecting operational data from a plurality of customer computers that utilize the computer-related product during operation of the plurality of customer computers (page 99, left column, “Distributed Software Engineering:” section, “Distributed configuration and deployment of systems:” bullet, sub-bullet 2, “The Software Release Manager...interdependent software systems”)

- (d) distributing the product support intelligent agent to at least first and second customer computers from the plurality of customer computers to remedy the undesirable operational condition in the first and second customer computers (page 99, left column, “Distributed Software Engineering:” section, “Distributed configuration and deployment of systems:” bullet, sub-bullet 1, “The Software Dock...a wide-area network”)

Motivation - The portions of the claimed method would have been a highly desirable feature in this art for evolving cheap software quickly (*Stidolph*, page 95, left column, “The Evolutionary Design of Complex Software (EDCS) Program” section, paragraph 2, “The ultimate vision...meet changing requirements – evolutionary systems”). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made, to modify *Bigus et al* as taught by *Stidolph* for the purpose of evolving cheap software quickly.

**Regarding claim 93:**

*Bigus et al* teaches,

- executing a first intelligent agent to perform a first task associated with remedying an undesirable operational condition associated with a customer computer that utilizes the computer-related product, wherein the first intelligent agent supplies a first component associated with the computer-related product (column 2, lines 59-65, "Intelligent agents may...of the client"; Figs. 5-6; column 10, lines 12-35, "Servers 65 of remote...in the alternative"; column 10, lines 49-59, "FIG. 7 illustrates an exemplary...of the client"; column 6, lines 14-22, "Domain knowledge may...for the client")

- (b) executing a second intelligent agent to perform a second task associated with remedying the undesirable operational condition, wherein the second intelligent agent is provided by a second vendor that supplies a second component associated with the computer-related product (column 8, lines 27-34, "an agent may...an agents' permutations")

However, *Bigus et al* doesn't explicitly teach the first intelligent agent is provided by a first vendor that supplies a first component associated with the computer-related product while *Stidolph* teaches,

- (a) the first intelligent agent is provided by a first vendor that supplies a first component associated with the computer-related product (page 108, right column, "WebDAV: <http://www.ics.uci.edu/pub/edcs/>" section, "WebDAV is an...of distributed files")

Motivation - The portions of the claimed method would have been a highly desirable feature in this art for evolving cheap software quickly (*Stidolph*, page 95, left column, “The Evolutionary Design of Complex Software (EDCS) Program” section, paragraph 2, “The ultimate vision...meet changing requirements – evolutionary systems”). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made, to modify *Bigus et al* as taught by *Stidolph* for the purpose of evolving cheap software quickly.

Claim 57 is rejected under 35 U.S.C. 103(a) as being unpatentable over *Bigus et al* in view of *Kohn et al* USPN 6,088,689 “Multiple-agent hybrid control architecture for intelligent real-time control of distributed nonlinear processes” (July 11, 2000).

**Regarding claim 57:**

*Bigus et al* teaches,

- analyzing the operational data from the customer computer using at least one intelligent agent (column 6, lines 6-13, “domain knowledge for... sales are low”; column 10, lines 12-22, “Server 65 of remote...and their clients”)
- (c) identifying as a result of the analysis an undesirable operational condition associated with the computer-related product in at least one of the customer computers (column 5, lines 42-53, “agents may have...networks vs. procedural logic), etc.”; column 6, lines 6-13, “domain knowledge for... sales are low”)

However, *Bigus et al* doesn’t explicitly teach (a) collecting operational data from a plurality of customer computers that utilize the computer-related product during



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operation of the plurality of customer computers or (b) analyzing the operational data from the plurality of customer computers using at least one intelligent agent while *Kohn et al* teaches,

- (a) collecting operational data from a plurality of customer computers that utilize the computer-related product during operation of the plurality of customer computers (Fig. 1a; column 10, lines 8-12, "A model of ... differentiable manifold M")

- (b) analyzing (Abstract, "A Multiple-Agent Hybrid Control Architecture ... ensemble of procedures") the operational data from the plurality of customer computers (Fig. 7; column 10, lines 42-51, "Also in expression ... the network's load") using at least one intelligent agent

Motivation - The portions of the claimed method would have been a highly desirable feature in this art for reducing costs (*Kohn et al*, column 4, lines 65-67, "It is another ... technology to substantially"; column 5, lines 1-2, "reduce costs of ... large-scale, distributed systems"). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made, to modify *Bigus et al* as taught by *Kohn et al* for the purpose of reducing costs.

## RESPONSE TO APPLICANTS' AMENDMENT REMARKS

Applicant argues that no new matter is being added in the amendment of claims 31-32 and the specification (Amendment REMARKS page 15, paragraph 3).

***Objections - Drawings, Specification and Claims***

Applicant argues that the amendments to the specification at page 28, line 28 and page 29, line 5 remove the grounds for the Fig. 10, item 302 inconsistent label drawing objection (Amendment REMARKS page 16, paragraph 1), XML and RETE are not trademarks (Amendment REMARKS page 16, paragraph 2), all the specification informalities have been addressed by the specification amendments (Amendment REMARKS page 16, paragraph 3 and page 17, paragraph 1) and the amendment to claim 32 removes the grounds for objection. The Applicant's arguments have been fully considered and are persuasive. All objections to the drawings, specification and claims are withdrawn.

***Claim Rejections - 35 USC § 101***

Applicant(s) argue(s) that certain elements of claims 1, 18, 31, 33, 57 and 93 render them statutory, such as the apparatus of claim 1 (Amendment REMARKS page 17, paragraphs 3 and 5), the amendment to claim 31 clarifying the signal bearing medium as computer-readable (Amendment REMARKS page 18, paragraph 3) and claim 57's "analyzing the operational data from the plurality of customer computers using at least one intelligent agent". Applicant's claims 1, 31 and 57 arguments have been fully considered and are persuasive. The 35 USC 101 rejections of claims 1, 31 and 57 are withdrawn. However, the 35 USC 101 rejection of claims 18, 33 and 93 are maintained since the language of the claims (e.g. "intelligent agent", "operational condition") raise a question as to whether the claims are directed merely to an abstract

idea that is not tied to a technological art, environment or machine which would result in a practical application producing a concrete, useful, and tangible result to form the basis of statutory subject matter.

***Claim Rejections - 35 USC § 102 and 35 USC § 103***

Applicant argues that Bigus et al USPN 6,192,354 may very well cover product support applications, but doesn't specifically mention independent claim 1's first and second product support intelligent agents for computer-related products limitations (Amendment REMARKS page 20, paragraphs 4-5 and page 21, paragraph 1) and that dependent claims 2-17 are also novel and non-obvious over Bigus et al and other prior art of record (Amendment REMARKS page 21, paragraph 3). Applicant's arguments have been fully considered. In light of the supporting disclosure's examples of product support without an explicit definition, the claims were given their "broadest reasonable interpretation" (see MPEP 2106). The use of Bigus et al's invention for covering product support applications directed towards computer-related products is agreed with for the interpretation of all claims. Therefore, the cited passages (column 2, lines 59-65, column 8, lines 27-34, column 10, lines 12-35, column 10, lines 49-59, Figs. 5-7) explicitly or inherently meet all claim 1 limitations, the rejections of dependent claims 2-17 stand and are further rejected for their dependence on rejected independent claim 1.

Applicant argues that since Bigus et al does not disclose the product support intelligent agent related limitations of independent claims 18 and 31, dependent claims 19-30 and 32 are also novel and non-obvious over the prior art of record so that there is

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no motivation to modify Bigus et al (Amendment REMARKS page 22, paragraph 1), the Bigus and Stidolph citations for the rejection of independent claim 33, read out the concept of product support from the claims (Amendment REMARKS page 22, paragraph 3 and page 23, paragraph 1) and that the Bigus and Stidolph page 108 citations for independent claim 93 do not teach the use of intelligent agents provided by different vendors. Applicant's arguments have been fully considered, but are not persuasive for the same reasons given above for claims 1-17, because the Stidolph page 108 reference teaches claim 93's limitations through the WebDAV protocol being developed by vendors including Microsoft, IBM, Xerox and Novell for collaborative use of distributed files and because no motivation is needed for claims 18 and 31 rejected under 35 USC 102(e).

Applicant argues that Bigus and Stidolph page 99 does not disclose the analysis of operational data from a plurality of computers limitation of independent claim 57 (Amendment REMARKS page 24, paragraph 2). Applicant's arguments have been fully considered, but are moot in view of the above new grounds of rejection. The examiner agrees that the Stidolph page 99 citation of the Aladdin tool does not meet the limitation of the independent claim 57. However, Kohn et al USPN 6,088,689 Fig. 1a and 7, the Abstract, column 10, lines 8-12 and column 10, lines 42-51 are cited for disclosing independent claim 57 limitations a and b. Further, the purpose and motivation for modifying Bigus include reducing costs disclosed in column 4, lines 65-67 of Kohn et al.

As set forth above with regards to Bigus et al, Stidolph and Kohn et al, the items listed explicitly and inherently teach each element of the applicants' claimed limitations.

Applicants have not set forth any distinction or offered any dispute between the claims of the subject application, Bigus et al's Apparatus and method for optimizing the performance of computer tasks using multiple intelligent agents having varied degrees of domain knowledge, Stidolph's Evolutionary Design of Complex Software (EDCS) Demonstration Days 1999 and Kohn's Multiple-agent hybrid control architecture for intelligent real-time control of distributed nonlinear processes.

### ***Conclusion***

The following prior art made of record is considered pertinent to applicant's disclosure:

- *Ahmad*; USPN 6,029,258; Method and system for trouble shooting and correcting computer software problems


Any inquiry concerning this communication or earlier communications from the Office should be directed to Melvin Bell whose telephone number is 571-272-3680. This Examiner can normally be reached on Mon - Fri 7:30 am - 4:00 pm.

If attempts to reach this Examiner by telephone are unsuccessful, his supervisor, Anthony Knight, can be reached on 571-272-3687. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 571-272-2100.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

MB/AM-n  
December 16, 2004



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